Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

This listing of claims will replace all prior versions, and listings of claims in the subject patent application as follows:

## **Listing of Claims:**

1. (PRESENTLY AMENDED) A method for subliminally encoding data in the image portion of a video signal, wherein the resolution of the image is decreased by a factor of N,comprising:

selecting a plurality of 2N consecutive lines in a frame of the video signal;

increasing the luminances of N consecutive lines by an amount that is not visually perceptible; and

decreasing the luminaces of the next N consecutive lines;

such that the encoding survives a subsequent decrease in resolutaion by a factor of N/2 by increasing and decreasing the luminances on N adjacent lines in a prescribed pattern that does not affect the image perceived by the human eye; whereby the encoding can be decoded after said reduction in resolution.

2. (PRESENTLY AMENDED).A method for subliminally encoding data in

the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 1 wherein when the luminance of a

each line is increased or decreased , the entire line is changed the same way uniformly.

3. (PRESENTLY AMENDED) A method for subliminally encoding data in the image portion of a video signal such that the encoding survives a subsequent

Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

decrease in resolution in accordance with claim 2 wherein the luminances of said N lines is varied according to a sinusoidal function.

- 4. (PRESENTLY AMENDED). A method for subliminally encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 2 wherein the luminances of said N lines is changed according to a sawtooth function.
- 5. (PRESENTLY AMENDED) A method for subliminally encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 2 wherein the luminance is increased a constant amount for N/2 lines and decreased by the same constant amount for N/2 lines.
- 6. (PRESENTLY AMENDED).A method for subliminally encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 2 wherein for each of said N lines for which the luminance is increased by a certain amount there is a corresponding line for which the luminance is decreased by the same amount.
- 7. (PRESENTLY AMENDED).A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution by comprising:

modifying a group of adjacent lines of a frame by increasing and decreasing the luminances of a <u>said</u> group of adjacent lines in a <u>frame following a</u> prescribed pattern that does not affect the image perceived by the human eye, the

Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

luminances of the lines being increased and decreased <u>by amounts selected to render</u> <u>said increases and decreases substantially invisible to a human eye, wherein in such a way that wherein in said prescribed pattern wherein substantially all of most of the lines are adjacent other lines whose luminances are changed in the same direction;</u>

transmitting said video signal with said modified lines;

downrezing said video signal; and

<u>extracting said data from said modified lines, wherein said data survices</u> said downrezing.

- 8. (PRESENTLY AMENDED). A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 7 wherein when the luminance of a line is increased or decreased uniformly.
- 9. (PRESENTLY AMENDED).A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 7 wherein the luminances of said lines are changed according to a sinusoidal function.
- 10. (PRESENTLY AMENDED). A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 7 wherein the luminances of said lines are changed according to a sawtooth function.

Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

11. (PRESENTLY AMENDED). A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 7 wherein the luminance is increased a constant amount for half the lines and decreased by the same constant amount for the other half of the lines of said group.

- 12. (PRESENTLY AMENDED).A method for encoding data in the image portion of a video signal such that the encoding survives a subsequent decrease in resolution in accordance with claim 7 wherein for each of said lines for which the luminance is increased by a certain amount there is a corresponding line for which the luminance is decreased by the same amount.
- portion of a video signal by comprising increasing and decreasing the luminances of a group of lines within a portion of a frame of the video signal in a prescribed pattern that selected to eliminate any effects on does not affect the image perceived by the human eye, the luminances of the lines being increased and decreased in such a way that most of substantially all of the lines are adjacent other lines whose luminances are changed in the same direction.
- 14. (PRESENTLY AMENDED). A method for encoding data in the image portion of a video signal in accordance with claim 13 wherein when the luminance of a line is increased or decreased, the entire line is changed the same way uniformly.

Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

15. (Original) A method for encoding data in the image portion of a video signal in accordance with claim 13 wherein the luminances of said lines are changed according to a sinusoidal function.

- 16. (Original) A method for encoding data in the image portion of a video signal in accordance with claim 13 wherein the luminances of said lines are changed according to a sawtooth function.
- 17. (Original) A method for encoding data in the image portion of a video signal in accordance with claim 13 wherein the luminance is increased a constant amount for half the lines and decreased by the same constant amount for the other half of the lines.
- 18. (Original) A method for encoding data in the image portion of a video signal in accordance with claim 13 wherein for each of said lines for which the luminance is increased by a certain amount there is a corresponding line for which the luminance is decreased by the same amount.
- 19. (NEW) A method of encoding data in the image portion of the video signal wherein said video signal is downrezed by a factor N further comprising :

selecting a group of 2N successive lines from a frame of the video signal;

raising the amplitude of N successive lines of said group by an amount small enough so that the change in the video signal is substantially imperceptible; and

lowering the amplitude of the remaining N successive lines of said group by the same amount.

Rule 111 Amendment dated April 22, 2005 Reply to Office Action dated November 26, 2004

Attorney Docket No.: 3054-056

20. (NEW) A method of encoding data according to claim 19 further comprising decoding said data, wherein the decoded data is unaffected by said downrezing.